A FORWARD LOOK AT DEPRECIATION

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by

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INTRODUCTION

General Comments

Usual accounting criteria require that a depreciation method be systematic and rational.[1] The word systematic is apparently being interpreted by many accountants as a methodical liquidation of depreciable assets without consideration to having funds available for replacement of these assets at the end of their useful life. This obviously does not meet the requirements of a rational method of depreciation--still the majority of accountants employed by business concerns in this country depreciate the historical cost of an asset without regard to the replacement cost, firmly believing that availability of funds for asset replacement is not an accounting problem but is a financial problem with which they are not concerned.[2]

The writer, while reading books and articles in the field of business and finance, became concerned with the mortician attitude displayed in regard to depreciation. Inadequate influence has been exerted on Congress to obtain a modern method of depreciation measurement. Depreciation policy of the past

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[1]National Association of Accountants, Current Practice in Accounting for Depreciation, A Report Prepared by the National Association of Accountants (New York: National Association of Accountants, 1958), p. 3.

[2]John Ryan, Current Depreciation Policies (New York: Fordham University Press, 1958), p. 13. "The Accountant is not concerned with the cause of depreciation and not qualified to judge the rate but only concerned with apportioning costs of recovering a past investment over income periods covering the life of the asset."

has been determined by the tax laws instead of the tax laws being determined by a depreciation policy which will protect the owner's equity.

Objective of Thesis

The objective, then, of this thesis is, first, to demonstrate that a viable depreciation policy can be developed that will not only protect the owner's equity but will also have a favorable effect on the national economy by taking into consideration modern economic conditions compatible with automation and technological development. A second objective is personally to become knowledgeable regarding the subject of depreciation.

The method of research has been indirect. The majority of data has been compiled from public documents, books, articles, periodicals, and reports in the field of business and finance. Personal interviews were also obtained with key personnel in business and government. Interviews were held with the following offices and incumbents:

Office	Name
U. S. Chamber of Commerce	Mr. J. Kirk Eads
U. S. Commerce Department	Mr. Robert Wasson
Machinery and Allied Products Institute	George Terborgh
Treasury Department	Elwyn T. Bonnell

Unless otherwise indicated, the statements are based on the opinions of the writer and have not been concurred in by any of the named gentlemen.

All public documents, books, articles, periodicals and reports used as references in this thesis have been included in the bibliography.

CHAPTER I

DEPRECIATION METHODS OF THE PAST

General

Webster's New World Dictionary states, "Depreciation is a decrease in value of property through wear, deterioration or obsolescence and the allowance made for this in bookkeeping accounting, etc."[3]

Dr. Ralph Dale Kennedy, Professor of Accounting and Executive Officer of the Accounting Department of The George Washington University, states:

> The systematic allocation of net cost of plant and equipment, exclusive of land, to the periods benefiting from the use is commonly called depreciation accounting. The cost to be allocated by charges to depreciation expense should be original cost plus or minus subsequent charges and reductions in the account and less any residual value.[4]

Dr. John Ryan, Professor at Fordham University, states, "Depreciation is not or should not be merely a question of writing off costs over the useful life. It is really a question of amortization of values."[5]

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[3]Joseph H. Friend and David B. Guralnik (ed.), Webster's New World Dictionary, (Cleveland: The World Publishing Co., 1960), p. 394.

[4]Ralph Dale Kennedy and Frederick Charles Kurtz, Introductory Accounting, (Scranton, Pa.: International Textbooks Co., 1960), p. 507.

[5]Ryan, p. 19.

CHAPTER I

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[5]Ryan, p. 19.

You will note that these three statements are at variance. Dr. Kennedy states that depreciation should be based on historical cost whereas Dr. Ryan indicates that the value (replacement value) instead of the historical cost should be the basis of taking depreciation expense. Webster's International Dictionary uses the word value instead of cost; however, the method in which it is used makes it both possible and probable that it would mean either amortization based on historical cost or replacement cost.

Dr. Kennedy's definition is adequate for depreciation computations allowed for tax purposes in the past; however, it will prove inadequate as a definition for the depreciation methods that will be allowed in the future. Therefore, the readers are requested to use the Webster definition, keeping in mind that depreciation can be based on either historical cost or replacement cost or variations thereof.

The words capital equipment and fixed assets will be used when discussing depreciation throughout the following pages. Capital equipment will apply to plant and equipment whereas fixed assets will apply to plant, equipment, natural resources and intangible assets subject to amortization.

As stated in the introduction, the depreciation policies of the past have been mainly determined by the tax laws existing at the time. A review of the changes that occurred in depreciation concepts, then, can be closely associated to a review of the changes made in the laws and acts affecting the allowance of depreciation expense.

Depreciation Methods Prior to 1954

Prior to 1894, the majority of businesses had no systematic procedure of recognizing the consumption of fixed assets. A large amount of the outlays for fixed assets was shown as an expense at the time of acquisition instead of the expense being spread out over the life of the asset in the form of depreciation. Other companies waited until replacement of an asset was required at which time they would charge the cost of the item to be replaced to the income of the final year. Still other companies would charge off arbitrary amounts, usually dependent on company's earnings, throughout the life of the asset.

In 1894, the income tax law specifically disallowed depreciation; however, this law was found unconstitutional in 1895, and did not greatly influence depreciation policies. The year 1909 was when the government first recognized that capital consumption existed. The act of that year permitted a reasonable allowance for depreciation to be taken.[6] The 1916 act specifically excluded obsolescence as an element in the depreciation rate. This, together with the difference of opinion by members of Congress as to whether or not to mention depreciation by name in other acts, "was simply a reflection of the /confusion of the/ business community on this subject."[7]

The decade of the 1920's was a period where there was little controversy regarding depreciation. The rate of depreciation was set by the business concern. "The burden of proof of the unreasonableness of the rate

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[6]George Terborgh, Realistic Depreciation Policies (Chicago: The Lakeside Press, 1954), pp. 2, 12, 13.

[7]Eugene L. Grant and Paul T. Norton, Jr. Depreciation (New York: The Ronald Press Co., 1949), p. 210.

lay with the Bureau /of Internal Revenue/ which had to find clear and convincing evidence of the unreasonableness."[8] The feeling of the government during this period was apparently that advantages gained by industry through a large depreciation rate in the early years of an asset's life would be balanced out by a small or nonexistent depreciation rate in later years.

The requirement for increased revenue by the federal government to support the public works program of the depressed thirties resulted in Treasury Decision 4422 of 1934. This required taxpayers to review their depreciable assets and to write off the undepreciated balances over the estimated remaining lives. It further provided that the burden of proof of the reasonableness of the rate of depreciation rested on the taxpayer, in complete reversal of the policy of the twenties. Terborgh states,

> Where the taxpayers' available records have been insufficient to establish satisfactorily the probable service lives of assets in use, the Treasury has frequently imposed lower depreciation rates arbitrarily by reference either to a manual /Bulletin F published in 1942/[9] purporting to reflect average experience, to the rates allowed to other taxpayers in the same line of business or to some other criterion.[10]

The tax policies introduced in 1934, stopped much of the previous capital investment. An attempt to reverse this trend and give the economy a broader industrial base resulted in legislation in 1939, which allowed for a declining-balance computation of depreciation that was equal to 150% of the

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[8]Ryan, p. 40.

[9]The reader is invited to peruse Appendix A for the more pertinent points and comments regarding Bulletin F.

[10]Terborgh, Realistic Depreciation Policy, p. 15.

straight-line method. The advantage of computing depreciation by this new method was so minimal that few businesses were to take advantage of the new tax law.

World War II and the Korean War resulted in the need for rapidly expanding production facilities and the resultant increased outlay for fixed assets. The government, in order to encourage the building of plants specialized for munitions production, authorized the amortization of these fixed assets over a five-year period instead of the empirical life of the asset. These special cases have all been completely amortized and no new cases of special amortization have been passed in spite of the introduction of many bills for five-year amortization of grain storage facilities, water pollution prevention, and aid to depressed areas.

The straight-line method of depreciation was used almost exclusively in the period prior to 1954. This method of depreciation was found adequate in periods of stable prices and slow technological progress. However, it was entirely inadequate in periods of inflation and rapid scientific progress such as were experienced during World War II and the following years.

> Under the straight-line method, the cost or other basis of property, less salvage value, is generally deducted in equal annual amounts over the period of its estimated useful life. The depreciation for each year is determined by dividing the adjusted basis of the property, less salvage value, by the remaining useful life of the property.[11]

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[11]U. S. Treasury Department, Your Federal Income Tax, 1962 Edition, Internal Revenue Service Publication No. 17, p. 58.

The following formula can be used for computation:

$$D = \frac{C-S}{N}$$

Where D is the amount of depreciation for an applicable period; C is the cost of the asset usually including transportation and installation; S is the salable or salvage value of the asset on termination of its useful life to the enterprise; and N is the number of years or other applicable depreciation periods the asset will be retained by the enterprise.

Depreciation Methods 1954 through 1961

General

The first real change in depreciation policy took place in 1954, when Congress and the administration realized that the straight-line method of depreciation was obsolete. The Internal Revenue Code of 1954 provided for two new methods of depreciation that would be of benefit to industry. Both of these methods allowed for the greatest amount of depreciation expense to be taken when the asset was new and most productive and when the least amount of expense for repairs was being incurred. The two methods for computation of depreciation expense for tax purposes allowed under the Internal Revenue Code of 1954, are commonly referred to as the double-declining balance method and the sum-of-the-year's-digits. There are now three generally accepted methods of computing depreciation expense available to an enterprise, but none of the three incorporates the effects of technological advancement or rising prises.[12]

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[12]See Appendix B for Section 167 of Internal Revenue Code of 1954 regarding depreciation.

TABLE 1

STRAIGHT-LINE DEPRECIATION

(A fixed asset costing $4400 with an estimated life of eight years and a terminal or salvage value of $400 is used for purposes of this table.)

Year	Computation	Current Year's Depreciation	Historical Cost Undepreciated Balance
1	$4000 - 8	$500	$3900
2	4000 - 8	500	3400
3	4000 - 8	500	2900
4	4000 - 8	500	2400
5	4000 - 8	500	1900
6	4000 - 8	500	1400
7	4000 - 8	500	900
8	4000 - 8	500	400
		$D = \frac{C-S}{N}$	
		$D = \frac{4400 - 400}{8}$	

Double Declining Balance Method of Depreciation

The main advantage of the double-declining balance method over the straight-line method of depreciation is that it takes into consideration that the services rendered by a fixed asset declines over the life of the asset.

> Under this method the amount of depreciation you take each year is subtracted from the cost or other basis of the property before computing next year's depreciation, so that the same depreciation rate applies to a smaller or declining balance each year. Thus, a larger depreciation deduction is taken for the first year you use the method and a gradually smaller deduction is taken in each succeeding year. Within limits a depreciation rate is used which is greater than the rate which would be used under the straight-line method.[13]

Simply stated, the declining-balance method is twice the rate of the straight-line method times the declining-balance. The following formula can be used for computation:

$$D = \frac{(C - \Sigma d) \times 2}{N}$$

Where D is the amount of depreciation for an applicable period, C is the cost of the asset including transportation and installation; Σd is the sum of depreciation taken in previous periods; and N is the number of years or other applicable depreciation periods the asset will be retained by the enterprise.

> The residual value is not deducted from the gross original cost to determine the balance against which the fixed percentage is applied since the percentage is computed to leave a book value at the end of the service life of the depreciable asset.[14]

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[13] Ibid.

[14] Kennedy and Kurtz, p. 511.

TABLE 2

DECLINING-BALANCE DEPRECIATION

(Use the same example we used under the straight-line method where we assumed that fixed assets cost $4400 with an estimated life of eight years and a terminal salable or salvage value of $400 in computing the declining-balance depreciation.)

Year	Computation	Current Year's Depreciation (Nearest $)	Historical Cost Undepreciated Balance
1	$\frac{\$4400 - 0}{4}$	$1100	$3300
2	$\frac{4400 - 1100}{4}$	825	2475
3	$\frac{4400 - 1925}{4}$	619	1856
4	$\frac{4400 - 2544}{4}$	464	1392
5	$\frac{4400 - 3008}{4}$	348	1044
6	$\frac{4400 - 3356}{4}$	261	783
7	$\frac{4400 - 3617}{4}$	196	587
8	$\frac{4400 - 3813}{4}$	147	440

$$D = \frac{(C - \Sigma d) \times 2}{N}$$

$$D = \frac{4400 - \Sigma d}{4}$$

d increases each year and is the sum of previous depreciation taken.

A declining-balance method could never depreciate an asset to a zero balance; however, the tax law does not prohibit the taxpayer from changing from the declining-balance method of computation to the straight-line method whenever it is to his advantage to do so unless an agreement has been made with the Treasury Department which would prevent the change.

> For taxable years after December 31, 1953, /the taxpayer/ has the option in the absence of any special agreement with the Treasury of changing from the declining-balance method to the straight-line method without permission. For any other change he must apply for permission within ninety days after the beginning of the taxable year to be covered by the return.[15]

In this way a taxpayer can compute depreciation by the declining-balance method for the early life of the asset when this method is to his advantage and then change to the straight-line method of depreciation in the later years of the asset's life when this method is compatible with the company's interests.

In Table 2, then, the taxpayer would change to the straight-line method in the eighth year and show depreciation expense of $187 for that year and a historical cost undepreciated balance of $400.

The declining-balance method of depreciation is allowable only in cases of assets having a useful life of at least three years and must be property constructed, reconstructed or erected when completion was after December 31, 1953, and then only to the portion of work done after that date or new property acquired after December 31, 1953, provided the taxpayer is

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[15]Ryan, p. 21.

the original user and commenced use after that date.[16]

Sum-of-the-Year's-Digits Method of Depreciation

The sum-of-the-year's digits method, like the double-declining balance method of depreciation, gives a rate which takes cognizance of the fact that the yearly value of services received from utilization of a fixed asset almost universally declines.[17]

> Under this method, you apply a different fraction each year to the basis of the property less its salvage value. The denominator or bottom of the fraction is the total of the numbers representing the years of useful life of the property. Thus, if the useful life is 5 years, the denominator is 15 (1 + 2 + 3 + 4 + 5 = 15). The numerator or top of the fraction is the number of years of life remaining at the beginning of the year for which the computation is made. Thus, if the useful life is 5 years, the fraction to be applied to the cost minus salvage to figure depreciation for the first year is 5/15. The fraction for the second year is 4/15 and so on.
>
> Depreciation on the sum of the years-digits method is allowed only on the following tangible property:
>
> 1. Property having a useful life of 3 years or more which you acquire new after December 31, 1953.
> 2. Property having a useful life of 3 years or more which is constructed, reconstructed, or erected after December 31, 1953, the original use of which began with you.[18]

The following formula can be used for computation:

$$D = \frac{(C-S) \times (N-P)}{1 \quad 2 \ldots N}$$

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[17] Ryan, p. 20.

[18] U. S. Treasury Department Publication, No. 17.

Where D is the amount of depreciation for an applicable period, C is the cost of the asset including transportation and installation; S is the terminal salable or salvage value; N is the number of years or other applicable depreciation periods; P is the number of prior periods in which depreciation was taken and 1 + 2... + N is the sum of the years or periods over which depreciation is to be computed.

Both of the depreciation methods first allowed under the Internal Revenue Code of 1954, recognized that the greatest value of the asset to the owner was in the early years of the asset's life.

> One reasonable criterion for the writing off of cost through depreciation accounting is that the general tendency of the accounting methods adopted should be to create depreciated book value not in excess of the current value of the assets to their owners in the light of the most economical available substitute. The best that can be done is to recognize that value to the owner declines more rapidly in the early years of life.[19]

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[19]E. L. Grant and P. T. Norton, pp. 368, 376.

TABLE 3

SUM-OF-THE-YEAR'S-DIGITS DEPRECIATION

(Again assume a fixed asset costing $4400 with an estimated life of eight years and a terminal salable or salvage value of $400 in computing the sum-of-the-year's-digits depreciation.)

Year	Computation	Current Year's Depreciation	Historical Cost Undepreciated Balance
1	$\frac{\$4,000 \times (8 - 0)}{36}$	888.89	$3511.11
2	$\frac{4,000 \times (8 - 1)}{36}$	777.78	2733.33
3	$\frac{4,000 \times (8 - 2)}{36}$	666.67	2066.66
4	$\frac{4,000 \times (8 - 3)}{36}$	555.56	1511.10
5	$\frac{4,000 \times (8 - 4)}{36}$	444.44	1066.66
6	$\frac{4,000 \times (8 - 5)}{36}$	333.33	733.33
7	$\frac{4,000 \times (8 - 6)}{36}$	222.22	511.11
8	$\frac{4,000 \times (8 - 7)}{36}$	111.11	400.00

$$D = \frac{(C - S) \times (N - P)}{1 + 2 \ldots = N} = \frac{(4400) - 400) \times (8 - P)}{1 + 2 + 3 + 4 + 5 + 6 + 7 + 8}$$

$$\frac{4000 \times (8 - P)}{36}$$

Note that the only yearly change in the formula is P which is the number of prior periods in which depreciation was taken.

CHAPTER II

NEW METHODS OF DEPRECIATION

General

New concepts of depreciation recognize the need for a method of charging to expense a cost that will more nearly approach the actual consumption of the true value of capital equipment. Previous depreciation methods have recognized the consumption of historical costs of capital equipment as well as the fact that the greatest value of capital equipment was in its early life; however, none of these methods recognized the requirement for funds to replace the asset at the end of its economic life to the company or that the useful life had been greatly shortened by obsolescence brought on by scientific and technical advances.

An accurate computation of manufacturing costs requires that true depreciation expenses be entered into these costs. The increased importance of depreciation as a component of manufacturing costs has been brought on by the trends experienced in World War II and the postwar period. These trends are:

1. Rising wage rates and intensified competition /which/ have led to greater mechanization which consequently increased investment in depreciable assets and higher depreciation costs.

2. More rapid obsolescence of assets due to:

a. Faster technological progress resulting in earlier appearance of superior types of equipment.

b. Automation which shortens economic life of equipment. Where short-lived tools were formerly used with long-lived general purpose machines, tools and machines are now combined into a single unit which is generally useful only for the life of the product model for which it was designed.

c. More frequent changes in products and models as a consequence of advancing technology and competition.

3. Rising prices which increase needs for cash to replace, modernize and expand depreciable assets.[20]

The new concepts or approaches to the true depreciation expense problem could be grouped in three main categories:[21]

1. Those that adhere to the historical cost but speed up the recovery of that cost.

2. Those that attempt to show the true current value of capital consumption based on replacement value of the asset at the date depreciation is taken.

3. Those that offer an incentive in the form of a special depreciation allowance or a tax credit to offset rising prices and encourage investment in capital equipment.

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[20]National Association of Accountants, pp. 1-2.

[21]George Terborgh lists two new approaches to the problem of depreciation: "(1) those that abandon the original costs basis for a higher one adjusted for the effects of inflation and (2) those that adhere to original cost as the basis of depreciation but attempt to increase the currently available allowance by speeding up the recovery of that cost." In this article he includes incentives under his second category. U. S. Congress, House, Committee on Ways and Means, Compendium of Papers on Broadening the Tax Base, 86th Cong., 1st Sess., 1959, p. 866.

Speed Up of Historical-Cost Concept

Two major considerations must be studied in the speed-up of historical cost depreciation. First, how much of a speed-up is required to offset the shortened life of capital equipment caused by technological and scientific advancement and second, how much of a speed-up of historical cost depreciation is required to offset the effects of inflation.

The first of these considerations is being actively pursued by the Treasury Department. A new depreciation decree in the form of a revised bulletin F prepared by the Internal Revenue Service will shorten the write off period of an asset by as much as 40%. This change is long overdue as the suggested useful lives in Bulletin F have not been revised since 1942, although a few new items have been added in recent years.

The Treasury is now winding up a series of engineering studies of actual capital equipment obsolescence rates. These studies will be the basis for bringing Bulletin F useful lives into line with what is actually being experienced by industry.

> While no final decisions have been made it's probable that the average reduction of useful lives from the present Bulletin F schedule will run between 20% and 30%. The Treasury will try to have the new schedule ready by May 15, if that date is missed June 15 is a secondary date.[22]

The life of a fixed asset is the period from acquisition of the asset until such time as replacement or scrapping of the asset is in the interest

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[22] The Wall Street Journal, March 2, 1962, p. 1.

of the enterprise. The determination that the asset is no longer of economic value to the enterprise can be a result of either wear or obsolescence through technological advancement. Now that a revised Bulletin F will take into consideration obsolescence the only important difficulty remaining which must be overcome is to develop a method of computing depreciation that will offset inflation and take into consideration the true value of capital equipment consumption.

The second consideration of speeding up historical-cost depreciation is to offset inflation. At first thought neither the adjusting of the period over which depreciation is to be computed nor an increased multiple of the declining-balance method of depreciation seems to be a logical method of offsetting the effects of inflation. However, "time is money" and the speeding up of the write off of capital equipment to depreciation expense will give the successful enterprise the use of funds that would otherwise have to be paid in current taxes.

Although a greater depreciation is taken in the early part of an asset's life the total amount of depreciation allowed is limited to the historical cost of the asset less the saleable or salvage value. The acceleration of depreciation expense reduces the amount of current cash outflow for taxes and gives the company the use of the money for a time proportionate to the acceleration of the depreciation. The lengthening of the life of an asset in times of deflation would have the opposite effect.

> The degree of acceleration of historical-cost depreciation required to offset the erosion of accruals through inflation depends, of course, on a number of factors: the rate of inflation, the estimated service life of the assets concerned, the write off applied and the value of money to the taxpayer.[23]

Shortened Life Method

The use of a shortened life would place the period over which the capital equipment is charged to expense at less than the useful life of the property. The enterprise would, in all probability, use the double-declining balance method of depreciation with the shortened life.

Table 4 demonstrates that accelerated depreciation would allow a greater degree of capital equipment to be written off to expense in the early life of the asset. It would reduce the cash flow for taxes in the early years of the asset's life and increase taxes in the less productive period of the asset's life which should greatly encourage replacement of the asset at an early date.

The advantages of the shortened-life method are: (1) the period over which inflation could increase replacement cost would be shortened and (2) the speed-up of taking depreciation expense would enable the enterprise to reduce cash outflow in the form of taxes, giving the enterprise the use of funds that would not ordinarily be available

Theoretically one could question what a period of depreciation shorter than the life of an asset has to do with inflation or replacement cost of an asset; however, from a practical point of view it can be shown

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[23] Ibid., p. 867.

TABLE 4

SHORTENED-LIFE DEPRECIATION

(Use a shortened-life equal to 75% of the actual life and the previous example of a fixed asset costing $4400 with an estimated life of eight years and a terminal or salvage value of $400 in computing the shortened-life depreciation.)

Year	Double-Declining Balance Method Depreciated over Eight Years	Double-Declining Balance Method Depreciated Over Six Years[a]	Accelerated Write Off (Cumulative)
1	$1,100	$1,467	$367
2	825	978	520
3	619	652	553
4	464	434	523
5	348	290	465
6	261	179	383
7	196		187
8	187[b]		

[a]Based on a period of 75% of actual life of eight years.

[b]Change to straight-line in eighth year.

TABLE 5

REDUCED CASH OUTFLOW AND VALUE OF FUNDS TO THE ENTERPRISE
AS A RESULT OF SHORTENED-LIFE DEPRECIATION

Using Table 4 for the basic information and assuming a tax rate of 52%, the company's cash outflow would be changed as follows:

End of Year	Cash Flow	Reduction in Cash Outflow (Cumulative)	Value of Funds to the Enterprise[a]
1	$191 less	$191	$19.1
2	80 less	271	27.1
3	17 less	288	28.8
4	16 more	272	27.2
5	30 more	242	24.2
6	43 more	199	19.9
7	102 more	97	9.7
8	97 more		
TOTAL			158.0

[a]Value of funds to the enterprise is 10% per year.

that the reduction of cash outflow in the early life of an asset will offset the effects of inflation.

This method has one definite advantage in giving effect to inflation over the other methods in that it can be accomplished by executive action in changing the useful lives of the item listed in Bulletin F without the need for congressional approval.

Increased Multiple of Declining-Balance Method

The second means of speeding up historical-cost depreciation is to increase the multiple of the straight-line rate used in the declining-balance write off. In this method, like the shortened-life basis, the value to the taxpayer is increased in that

> . . . a dollar today is worth more than a dollar in the future. For this reason the tax benefits from original cost depreciation, if received earlier than those from adjusted or current dollar equivalent depreciation, may be worth as much as the latter not withstanding the fact that they are smaller in aggregate amount.[24]

The multiple that must be applied to the declining-balance method of depreciation must be one that will generate enough depreciation expense with resultant reduction in current cash outflow for taxes that the value of the use of the money to the taxpayer will equal the inflationary effect on capital replacement or, as Terborgh states, the multiple that must be applied "in order that the tax savings from the accruals, stated in the dollars of investment, will equal the value of the tax savings from the double-rate application, similarly stated when there is no inflation."[25]

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[24]Terborgh, p. 867.

[25]Ibid., p. 868.

Table 6 graphically displays the multiple that must be applied under given service lives and values of money to the taxpayer in order to offset rates of inflation.

Table 6 shows that the multiple would have to be considerably increased to cover the average 4% inflation experienced over the past fifteen years (1947-1961) as measured by the wholesale price index of producer finished goods.[26]

It is interesting to note the similarity that can be obtained in value of funds to the enterprise under either the shortened-life or increased multiple of declining-balance computation of depreciation.

The authority to increase to a greater multiple than the present 200% of straight-line for computation of declining-balance depreciation would require a special enactment of Congress. The multiple would need to be tied to a price index if it were to respond to periods of inflation and deflation.

Both of the methods discussed adhere to the historical cost. They speed up the recovery of that cost and are efficient and fair methods of offsetting future inflation, but they do not take into consideration the effects of inflation on "old" assets of which a high portion of the cost has already been written off to expense.

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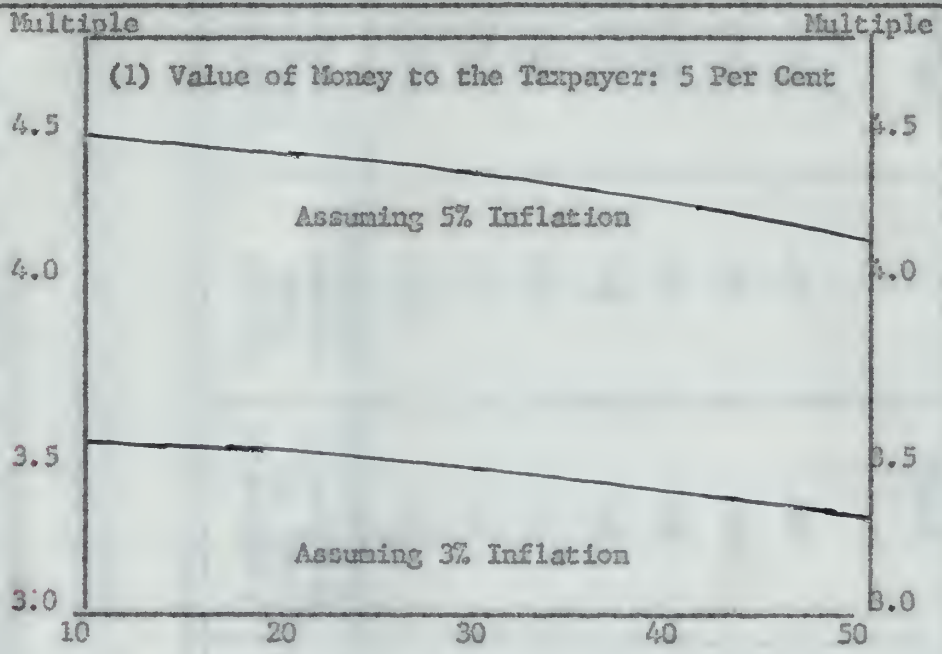
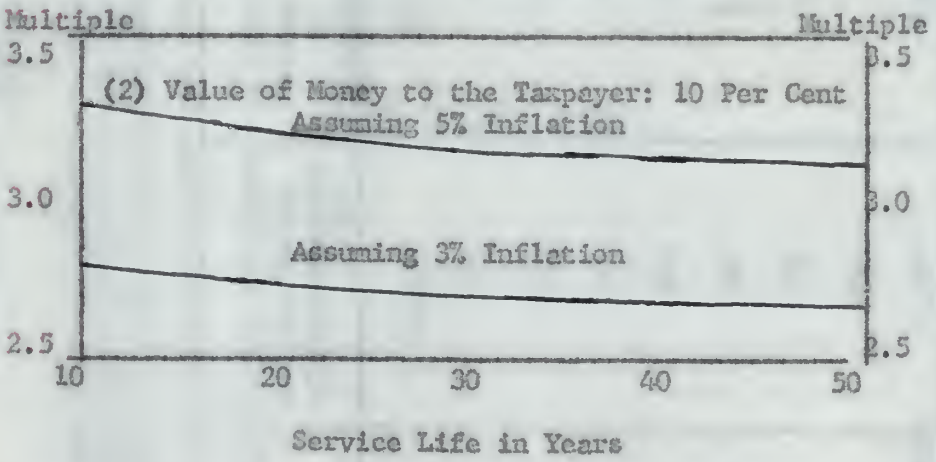
[26]During the same period the wholesale price for all industrials has increased an average of 2%. This percentage would be much higher if it were not for the inclusion of the 1% average increase in crude materials which, of course, is not a capital expenditure. Therefore, the 4% average increase of producer finished goods is the most realistic basis for computation of the effects of inflation on capital equipment. U. S. Council of Economic Advisors, Economic Indicators, February, 1962, Prepared for the Joint Economic Committee, 87th Cong., 2nd Sess., 1962, p. 24.

TABLE 6

THE /MULTIPLE OF THE/ DECLINING-BALANCE RATE REQUIRED, UNDER INFLATIONS OF 3 PER CENT AND 5 PER CENT PER ANNUM, IN ORDER TO YIELD TAX SAVINGS WITH A VALUE (IN THE DOLLARS OF INVESTMENT) EQUAL TO THAT OF THE SAVINGS YIELDED BY THE DOUBLE-RATE APPLICATION IN THE ABSENCE OF INFLATION: (1) WHEN THE VALUE OF MONEY TO THE TAXPAYER IS 5 PER CENT; (2) WHEN IT IS 10 PER CENT (MULTIPLES OF THE STRAIGHT-LINE RATE)[a]





[a]U. S. House of Representatives, Committee on Ways and Means. Compendium of Papers on Broadening the Tax Base. 86th Cong., 1st Sess., 1959, p. 869.

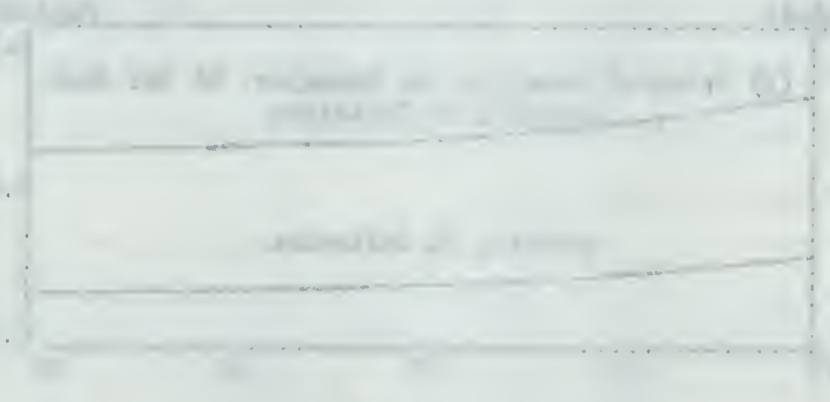


TABLE 7

REDUCED CASH OUTFLOW AND VALUE OF FUNDS TO THE ENTERPRISE RESULTING FROM 3.3 DECLINING-BALANCE DEPRECIATION

(Again use our example of a fixed asset costing $4400 with an estimated life of eight years and a terminal or salvage value of $4400 in computing reduced cash outflow and value of funds to the enterprise.)

Year	Double Declining Balance Method of Depreciation	3.3-Declining Balance Method of Depreciation[a]	Accelerated Write Off Col.1-Col.2 (Cumulative)	Reduced Cash Outflow Cumulative[b]	Value of Funds to the Enterprise[c]
1	$1,100	$1,452	$352	$192	$19.2
2	825	972	509	265	26.5
3	619	652	542	282	28.2
4	464	437	505	263	26.3
5	348	293	450	235	23.5
6	261	194	383	199	19.9
7	196		187	107	10.7
8	187				
Total	4,000	4,000	Total		154.3

[a]Based on previous chart--4% inflation.
[b]Based on a tax of 52%.
[c]Value of funds to enterprise--10%.

Current-Value Concept

Current value depreciation is based in one form or another on the replacement value of the asset. Mr. Terborgh states:

> The logical way to deal with the deficiency of historical cost tax depreciation allowances resulting from past inflation is to adjust these allowances to their equivalent in present dollars. This is the only way to achieve a reasonable degree of equity among taxpayers. It gives relief where it is needed and in proportion to the need.[27]

His statement is sound except that it omits mention of the fact that part of the cost of the asset has been charged off in the past when replacement value was less than at the present date and the effect of the reduced cash outflow at the time depreciation was taken gave the enterprise the use of funds. As long as "time is money" the use of these funds will have offset any subsequent increase in replacement costs on a portion of the capital expenditure equal to the depreciation. A completely fair and equitable depreciation based on replacement cost would have to be computed on the true value of the undepreciated balance at the end of each period (usually year) of an asset's life.

Replacement-Cost Method

An often suggested method of depreciation computation that would give fair consideration to the current value of depreciation is based on the actual replacement cost of a fixed asset. This method is similar to the L. I. F. O.

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[27] Compendium of Papers on Broadening the Tax Base, p. 871.

method of pricing inventories. Ryan has stated

> . . . in the final analysis, the argument for replacement-cost depreciation merely insists that original investment should be recovered tax-free and that this method, like the L. I. F. O. method of inventory valuation charges current income with current costs.[28]

Some sources recommend that the entire replacement value at expiration of useful life be allowed in depreciation without regard to the fact that the majority of the depreciation expense has been recorded in the first two-fifths of the asset's life. This concept cannot be accepted as long as there is a "time value" in the use of money as expressed previously. Therefore, depreciation must be computed on replacement value for the undepreciated balance. This would mean that the $\frac{\text{replacement cost}}{\text{historical cost}} \times$ historical depreciation would give the true depreciation.

Theoretically, this method of depreciation is the most accurate and equitable of any method of depreciation; however, in practice the computation of replacement cost is almost impossible. The identical machine could seldom be procured and if it were available, it would not usually be in the interests of the enterprise to do so as technological and scientific advancement would have made improvements in the item produced and/or the capital equipment used in its manufacture. Even after the enterprise computed a replacement cost that it felt was accurate, the burden of proof placed on them by the Treasury Department for income tax purposes would be next to impossible.

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[28]Ryan, pp. 66-67.

TABLE 8

REPLACEMENT-COST DEPRECIATION

(Again using our example of a fixed asset costing $4400 with an estimated life of eight years and a terminal salable or salvage value of $400 we can compute replacement cost depreciation.)

Year	Replacement Cost	Double-Declining Balance of Depreciation[a]	Computation[b]	Depreciation Amount (Nearest $)
1	$4444	$1100	$\frac{\$4444}{4400} \times \$1100$	$1111
2	4488	825	$\frac{4488}{4400} \times 825$	842
3	4576	619	$\frac{4576}{4400} \times 619$	644
4	4664	464	$\frac{4664}{4400} \times 464$	492
5	4752	348	$\frac{4752}{4400} \times 348$	376
6	4840	261	$\frac{4840}{4400} \times 261$	287
7	4972	196	$\frac{4972}{4400} \times 196$	221
8	5104	187	$\frac{5104}{4400} \times 187$	217
			Total	$4190

[a]For computation of double-declining balance of depreciation, see Table 2.

[b]$\frac{\text{Replacement cost}}{\text{Historical cost}} \times$ double-declining balance of depreciation.

Price Index Method

If a current value concept is to be accepted, it must be practical, workable, and based on a system which is readily acceptable to both the enterprise and the Treasury Department for tax purposes. Such a system is possible by the use of a price index.

In order to use a simple price index method of depreciation, the historical cost maintained by the year of asset acquisition would still be the basis of computation. The depreciation figure would be obtained by dividing the current index number by the index number of the year the asset was acquired and multiplying this figure by the historical depreciation obtained by one of the presently accepted depreciation methods.

In both of the immediately preceding cases the basis has been the historical cost with the depreciation taken being credited partly to accumulated depreciation, which is an offset to the historical cost, and partly to "depreciation due to inflation." A sum equal to the total credited to these accounts would, of course, be debited to depreciation expense. The credit to accumulated depreciation would be the same as under the previous method of depreciation used by the enterprise. The amount credited to "depreciation due to inflation" would be the result of depreciation due to an increase in the price index.

> When using a method of replacement cost based on an index of prices, it is necessary that the remaining book values be classified by the year of origin and a set of official multiples for past years be used to find the current replacement value.[29]

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[29]Ryan, p. 64.

TABLE 9

PRICE-INDEX DEPRECIATION

(Again using our example of a fixed asset costing $4400 with an estimated life of eight years and a terminal salable or salvage value of $400 we can compute price-index depreciation.)

Year	Double-Declining Balance Method of Depreciation	Price Index	Computation	Depreciation Amount
1	$1100	136	$\frac{136}{136} \times 1100$	$1100
2	825	138	$\frac{138}{136} \times 825$	861
3	619	140	$\frac{140}{136} \times 619$	633
4	464	141	$\frac{141}{136} \times 464$	481
5	348	145	$\frac{145}{136} \times 348$	371
6	261	148	$\frac{148}{136} \times 261$	284
7	196	152	$\frac{152}{136} \times 196$	219
8	187[a]	154	$\frac{154}{136} \times 187$	212
			Total	4161

[a]Change to straight-line in the eighth year.

Other sources recommend that the asset should actually be written up and that the credit arising from this write-up should be entered to appreciation surplus or similar entry, but in no case should the write-up be credited to earned surplus.[30] The author of this thesis has selected for his example the method based on maintaining the historical cost of the asset but adjusting the depreciation by use of a price index.

By the use of this method both the economics of the future--of interest to the financial manager--and the recording of the historical past--of interest to the accountant--will be satisfied. Professor Edwards notes well the difference in outlook of these two closely related fields when he states, "economics deals with the future and the decisions which will determine that future, while accounting is primarily concerned with historical description."[31]

The experiences of France with capital equipment revaluation further substantiate that if price-level depreciation is to be successful, it must be based on historical cost with the depreciation adjusted for inflation.

> France's abandonment of revaluation and price level depreciation may be perhaps the most significant aspect of her experience. France, pioneer in revaluation, the country with the longest and keenest experience with the device, abolishes it just as soon as the price level becomes as stable as that in other advanced industrial countries--the United States, for example. No advanced country now uses revaluation, although many have tried it.[32]

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[30] Ibid., p. 58.

[31] Edgar O. Edwards and Philip W. Bell, The Theory and Measurement of Business Income, (Berkley, California: University of California Press, 1961).

[32] Martin Norr, "Depreciation Reform in France," Taxes, May, 1961, p. 391.

Incentive Concepts

As the word incentive implies, the purpose of this special depreciation allowance is to create an incentive for greater investment by allowing an immediate reduction in taxes based on the expenditure for new capital equipment.

Two types of incentive have been widely discussed: those that allow a direct offset to taxes in the form of a tax credit, and those that provide for a special depreciation allowance in the first year of the asset's life. Both of these types of incentive result in the actual practice of taking depreciation in excess of 100% of historical cost.

Tax Credit Incentives

The tax credit incentive is the means by which the Kennedy Administration is attempting to increase capital investment. The President expressed the administration's feeling regarding depreciation when he stated:

> It is true that this advantage of focusing entirely on new investment is shared by the alternative strongly urged by some--a tax change permitting more rapid depreciation of new assets (be it accelerated depreciation or an additional depreciation allowance for the first year). But the proposed investment credit would be superior, in my view, for a number of reasons. In the first place, the determination of the length of an asset's life and proper methods of depreciation have a normal and important function in determining taxable income, wholly apart from any considerations of incentive; and they should not be altered or manipulated for other purposes that would interfere with this function. It may be that on examination some of the existing depreciation rules will be found to be outmoded and inequitable; but that is a question that should be separated from investment incentives. A review of these rules and methods is underway in the Treasury Department as a part of its overall tax reform study to determine whether changes are appropriate and, if so, what form they should take. Adoption of the proposed incentive credit would in no way foreclose later action on these aspects of depreciation.

> In the second place, an increase in tax depreciation tends to be recorded in the firm's accounts, thereby raising current costs and acting as a deterrent to price reduction. The proposed investment credit would not share this defect.
>
> Finally, it is clear that the tax credit would be more effective in inducing new investment for the same revenue loss. The entire credit would be reflected immediately in the increased funds available for investment without increasing the company's future tax liability. A speedup in depreciation only postpones the timing of the tax liability on profits from the investment to a later date--an increase in profitability not comparable to that of an outright tax credit. Yet accelerated depreciation is much more costly in immediate revenues.
>
> I believe this investment for tax credit will become a useful and continuous part of our tax structure. But it will be a new venture and remain in need of review. Moreover, it may prove desirable for the Congress to modify the credit from time to time so as to adapt it to the needs of a changing economy. I strongly urge its adoption in this session.[33]

The tax credit now pending in the House of Representatives provides for a credit of up to 7% on new purchases of business equipment. This bill is opposed by most business men, who would prefer a further liberalization of depreciation schedules.

Business is not the only group which has opposed the 7% tax credit. Representative John W. Byrnes of Wisconsin pretty well sums up the feeling of organized labor when he quotes:

> The AFL-CIO has strongly and vigorously opposed the investment tax credit proposal as one that would grant a major tax windfall to corporations without accomplishing its basic purpose of increasing the efficiency of American productive capacity.[35]

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[33]U. S. Congress, House, Committee on Ways and Means, Hearings, Tax Recommendation of the President in his Message Transmitted to the Congress, April 20, 1961, 87th Cong., 1st Sess., 1961, p. 8.

[34]Substantiated by letters in the file of the U. S. Chamber of Commerce which were perused on 22 February 1962; also the statement in the Wall Street Journal which states: "This (7% tax credit) plan has not caught on among businessmen." Wall Street Journal, February 26, 1962, p. 1.

[35]U. S. Congressional Record, 87th Cong., 2nd Sess., 1962.

The Republican political party also opposes Section 2 of HR 10650 which provides for the 7% tax credit. Representative Noah M. Mason from Illinois stated the position of the Republican minority as follows:

> Only one of these sections--section 2 dealing with the so-called investment credit--results in a revenue loss. We of the minority object to this section, first, because it constitutes a scandalous handout to business at the expense of all taxpayers; and secondly, because even if there were some justification for this subsidy, the timing is wrong.
>
> The investment credit is supposed to expand our capacity to produce. If we accept the statements of the witnesses from both labor and industry in the hearings on the trade bill, our problem is not lack of capacity to produce, but lack of a market in which to sell. Section 2 of the bill does nothing to remedy the latter.
>
> Basically, however, we feel that the Congress cannot in good conscience grant a special subsidy to business at a time when we are facing a tremendous deficit in the Federal budget.

Representative Mason further stated that

> The investment credit is not going to have any effect on business at this time. In fact, the Wall Street Journal made an independent survey which established that business would not materially change its plans in order to get more of this gratuitous handout.[36]

Mr. Francis D. Halford expressed the policy of business when asked if the 7% tax incentive would change capital expenditure plans. He stated

> We hold the line on capital expenditures when earnings are not particularly good to keeping our plant modern and to purchasing equipment that will increase our immediate net income.[37]

In considering the 7% tax credit the statements by Secretary of the Treasury Dillon should be given full weight. "The investment credit will in no

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[36] Ibid., No. 49, 4881.

[37] Interview with Francis D. Halford, Controller, Oscar Mayers, March 29, 1962.

way prejudice the case for such depreciation reform as may prove to be desirable to improve income measurement."[38]

It appears from the letters in the U. S. Chamber of Commerce and statements in the Wall Street Journal that businessmen are not fully informed on Secretary Dillon's statement or they would not be as violently opposed to the bill unless, as Louis Shere stated, "Business resented what it regarded as an attempt by government to interfere with management decisions to invest or not to invest."[39]

The use of an incentive tax credit is not novel as it has been effectively used in Belgium, Holland and the United Kingdom. The advantages expected of such a system in this country are that:

> The credit will not be booked in corporate records as a cost of operation as would increased writeoffs under accelerated depreciation.
>
> Thus, the credit avoids distortion of the costs on which a firm basis its pricing and other business decisions. Since one of our major goals is to hold the price line so as to strengthen the dollar, this advantage of the credit is of very great significance.

The second advantage is that

> The investment credit does not confuse the problem of stimulating investment with that of properly defining taxable income. The amount deducted depends on the method of depreciation and the depreciable lives of the assets, and both of these are subject to differences of opinion and debate.[40]

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[38]Committee on Ways and Means, Hearings, Tax Recommendations, 1961, p. 26.

[39]Louis Shere, "Federal Tax Reforms," Business Horizons, Winter, 1961, p. 35.

[40]Committee on Ways and Means, Hearings, Tax Recommendations, 1961, p. 25.

There has been a definite attempt by the Kennedy Administration to separate the investment credit from depreciation; however, an enterprise cannot separate the two in its planning and in this thesis it has been considered as a method of depreciation.

The 7% credit to taxes would have different effects on different companies. The small company paying only 30% in taxes on earnings would receive the equivalent of 123-1/3% of the allowed depreciation of historical cost and the large company paying 52% in taxes would receive the equivalent of 113.3% of allowed depreciation of historical cost. The legislation as proposed, therefore, is more favorable to the small businessman than to the large enterprise. However, it does not apply to all used equipment and many small businesses which purchase used equipment will not be able to take advantage of its provisions.

Using our example of a fixed asset costing $4400 with an estimated life of eight years and a terminal saleable or salvage value of $400, we can compute the tax credit for a small business paying 30% taxes on earnings. The enterprise can be assumed to use the double-declining balance method of depreciation as shown in Table 2. In the first year the company would take its depreciation expense of $1,100, as well as the other expenses of operation. In this case, assume the company had a profit before taxes of $20,000 on which it would pay taxes of $6,000. From this figure it could subtract 7% of $4,400 or $308--resulting in actual tax payments of $5,692. This would have the same result as allowing a 23.3% special depreciation allowance. To illustrate: $20,000 earnings before taxes minus 23.3 x 4400

equals 18,975. The $18,975 adjusted earnings times the 30% tax rate generates a requirement for a tax payment of $5,692.

Special Depreciation Allowance

The special depreciation allowance has the same basic effect as the tax credit incentive. It allows for an amount greater than 100% of the historical cost to be recouped as depreciation expense whereas the tax incentive obtains the same result by means of a credit to income tax.

This method has a greater realism than tax credit in that it sees a value consumption greater than the historical cost of the item and therefore allows for inflation. From the viewpoint of an immediate expansion of gross national product it has the disadvantages of showing a greater cost of manufacturing; however, the funds available for dividends would be as great as under the tax credit method as there would not be a necessity for retaining earnings for replacement of assets as would be required under the tax credit method.

Another advantage would be recognition that industry does not need to be subsidized in the form of a tax credit but simply needs a realistic depreciation policy that would allow for capital equipment replacement in a period of inflation.

A similar result to the 7% tax credit could be obtained by allowing a special depreciation allowance of 23.3% to small business and 13.3% to large businesses. Using our previous example of a small business paying a tax of 30% on earnings before taxes of $20,000, a special depreciation

allowance of 23.3% on $4400 would reduce earnings before taxes by $1,025. This gives a taxable income of $18,975. Taxing this at a rate of 30% the company pays taxes of $5,693--the same amount as under the tax credit method.

CHAPTER III

DEPRECIATION AND NATIONAL ECONOMICS

General

> To meet the needs of a growing population and labor force, and to achieve a rising per capital income and employment level, we need a high and rising level of both private and public capital formation.
>
> . . . . . .
>
> I am now proposing additional incentives for the modernization and expansion of private plant and equipment.
>
> . . . . . .
>
> Additional expenditure on plant and equipment will immediately create more jobs in the construction, lumber, steel, cement, machinery, and other related capital goods industries. The staffing of these new plants--and filling these orders for new markets--will require additional employees. The additional wages of these workers will help create still more jobs in consumer goods and service industries. The increase in jobs resulting from a full year's operation of such an incentive is estimated at about half a million.[41]

The President in the above quotation has attempted to obtain public support for a tax incentive to bring about replacement of obsolete capital equipment being used in this country. It gives official recognition that the depreciation policies in this country over the past years have been inadequate for replacement of capital equipment. Ryan states, "The United States has had

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[41]Committee on Ways and Means, Hearings, Tax Recommendations, 1961.

the worst depreciation policy of all industrial countries (as) is clearly evidenced by a survey of recent depreciation policies in Canada and some other European countries."[42]

The recent steps that have been or are being taken by the government to aid industry in replacement of capital equipment are the revised Bulletin F in which the tables of useful lives of depreciable property will be reduced by an average of 20 to 30%,[43] and the 7% tax credit bill, H. R. 10650, which was passed by the House of Representatives on March 29, 1962.[44]

Do these two steps meet the basic requirements of a viable depreciation policy? First, we should state the requirements of such a policy. They are to:

1. Protect the owner's equity by granting a depreciation allowance that is adequate for long-run asset replacement.

2. Encourage efficiency and economy by not penalizing the vigorous industry to support the inefficient.

3. Maintain industry as a source for a fair portion of tax revenue.

4. Encourage replacement of obsolete equipment with that which is modern and efficient.

5. Establish a systematic depreciation policy that treats all companies equally and fairly.

6. Adopt a depreciation system that is easily understood, applied and enforced.[45]

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[42]Ryan, p. 46.

[43]Wall Street Journal, March 2, 1962.

[44]See Appendix C for the pertinent points of H. R. 10650 regarding depreciation.

[45]For somewhat similar conclusions obtained by interviews with fifty-one of the major companies see the article by Robert R. Milry, Donald F. Istvan and Ray M. Powell, "The Tax Depreciation Muddle," The Accounting Review, (October, 1961), p. 539.

Each one of these points will be discussed in the following paragraphs with reference to the administration's proposed changes in Bulletin F and the 7% tax credit.

Protection of Owner's Equity

The protection of the owner's equity through the proposed 7% tax credit and revision of schedule F is not adequate. Neither of these two measures takes into consideration a method of depreciation that will provide for replacement of assets in periods of inflation.

> If the depreciation allowance is inadequate how /will/ business firms with depreciable assets make good the deficiency in depreciable allowances? The answer is that corporate and other business profits /will be/ overstated by the amount of the deficiency, that taxes will be levied on ficticious profits, and that retained earnings /will/ contain a substantial element which should have in equity been charged off as depreciation. Retained earnings /will be/ partly used for mere replacement and only partly represent business growth.[46]

Efficiency and Economy

There is a constant attempt by many well meaning economists and tax experts to protect the inefficient industry while placing a "millstone" on the efficient and vigorous industry in order to make the inefficient competitive. These experts will subsidize an industry and while subsidizing will establish government control over the industry. The present 7% tax

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[46] Ryan, p. 51.

credit in many respects is just such a case. An enterprise or industry that has maintained a modern plant and built production capacity to meet future requirements will be penalized for this long-range planning. These far-sighted industries will continue to pay a 52% tax rate on earnings and lack the opportunity for obtaining the special tax credit received for large capital expenditures. On the other hand the enterprise or industry which has failed to modernize will be able to receive maximum benefits by modernizing or even changing their field of manufacture.

The revision of Bulletin F should encourage increased efficiency and economy by allowing realistic lives over which to charge off capital equipment. This makes asset replacement and increased efficiency in the interests of the concern where previously such replacement had not been financially sound.

Maintaining Tax Revenue

A company or corporation receives the same rights and privileges that the individual does and like the individual must pay for the protection of these rights and privileges through the form of taxes. As long as we believe in the policy that taxes should be levied on one's ability to pay, we can expect a corporation's taxes to be based on its earnings.

Though we may not agree on the amount of government furnished "services," we all agree that some must be furnished; such as law endorcement, highway construction, security furnished by defense expenditures, etc. If the same governmental functions are to be continued, the reducing of corporate

tax receipts would require an ultimate increase in individual receipts; therefore, instead of having a beneficial effect on gross national product the reduction of tax revenue from corporations could have a detrimental effect. The long-range outlook for the 7% tax credit could well have just such an effect.

A brighter side could be that business would be so stimulated that no tax loss would result. This concept was expressed by H. T. McOnly in regards to reinvestment depreciation which could be equally applied to a tax credit. He stated:

> Reinvestment depreciation as a proposed tax measure will serve as a stimulant to business and should not result in any decrease in current national taxable income. It couples a tax recovery with an expenditure of several times the amount of the recovery. The expenditure itself represents business on which taxes will be paid--corporate taxes, individual taxes on the labor created, and taxes on dividends distributed out of the added profit. For example, a $52 reinvestment depreciation tax recovery represents $100 of deficiency recovered, and at an index of 200 would call for $200 in expenditures for additions, all of which represents sales volume and increased business activity. This $200 should as a minimum create corporate taxable income of primary and secondary, etc., suppliers of $40.00 resulting in $21.00 tax. Individual income taxes collected on the labor created through all the steps of production set in motion (including the production of items which will be purchased by the employees and shareholders receiving added income) plus the taxes collected on dividends distributed out of the added profit (even if computed at the lowest personal income tax rate of 20%) would certainly exceed the balance of $31.00 necessary to offset the $52.00 tax recovery permitted to the company. To the extent that additional business is thus created, the measure would take nothing currently from the Treasury Department and actually could increase total current taxable revenues.[47]

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[47]H. T. McOnly, "An Appraisal of Reinvestment Depreciation," The Controller, October, 1958, p. 47.

Replacement of Obsolete Equipment

An effective depreciation policy must not only allow but also encourage replacement of obsolete equipment. The encouragement could be initiated by providing both a minimum and a maximum period over which depreciable property could be charged to expense. If there is justification in establishing a low limit on the bell curve of useful lives of an asset, there should be a greater justification in establishing a high limit. Establishing a high limit would give a great incentive to asset replacement as well as protecting the owner's equity against unscrupulous management.

A depreciation policy that takes into consideration the true value of the use of an asset--in the form of depreciation tied to replacement value--is the only way in which depreciation will be adequate to offset the cost of replacement. The 7% tax credit and the proposed changes to Bulletin F are both dependent on historical cost and do not adequately provide for asset replacement over an extended period.

In the immediate future

> . . . an added push to expansion and modernization should result from the proposal now in Congress to allow industry a /seven per cent/ tax credit for investment in machinery and equipment. It has not yet been enacted into law, but it has the strong backing of the President and it is given a good chance of passage by those who follow such matters closely.
>
> A similar push is expected to be supplied by the Treasury Department's promised revision of Bulletin F, which specifies the length of time over which depreciation of specified assets must be stretched. Shortening of these periods--by as much as 40% in some revisions already announced--should still further add to industry's ability to pay for new equipment.[48]

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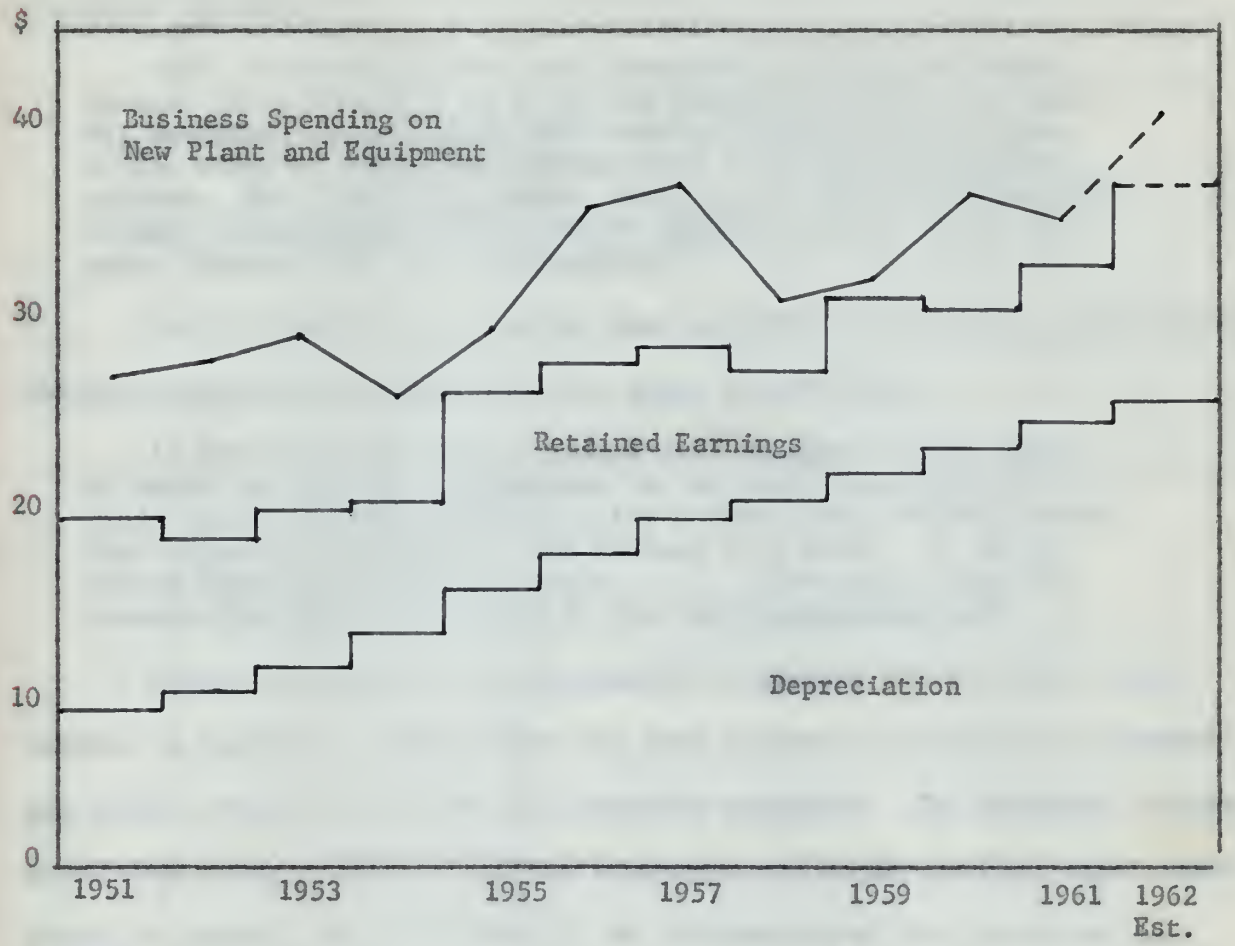
[48] Security and Industry Survey, Spring, 1962, A Report Prepared for Merrill, Lynch, Pierce, Fenner, and Smith, Inc. (New York: Advertiser Offset Corporation, 1962).

TABLE 10

CAPITAL SPENDING AND INTERNAL FUNDS[a]
(in billions of dollars



[a]Security and Industry Survey, Spring, 1962, A Report Prepared for Merrill, Lynch, Pierce, Fenner, and Smith, Inc. (New York: Advertiser Offset Corporation, 1962), p. 5.

Equal and Fair Treatment

Neither the present tax law nor the proposed changes to Bulletin F and the 7% tax credit establishes a depreciation policy which treats all companies equally.

> Small business receives less favorable depreciation rates because it is compelled to go by the Treasury's cruel rule book. Big business, on the other hand, can and does get better rates on the basis of expensive evidence that it alone can afford to prepare. The first requirement, then, is to reform the Treasury's alleged discriminatory depreciation practices and to align the rates between small and big business.[49]

Small business also receives less favorable depreciation rates because the declining-balance method does not apply to used items.

> If the declining-balance method were applied to used tools, it would not only be advantageous to the small manufacturer, it would have a desirable effect on the machine tool industry and on the technical efficiency of the economy as a whole. It would hasten upgrading of machine tools. . . . This would lower the competitive advantage enjoyed by the large manufacturer.[50]

Another inequity is that successful companies which utilize large numbers of unskilled laborers show the real expense of salaries as consumed and needn't worry about funds for continued operation. The automated company which uses large amounts of capital equipment and highly skilled labor cannot charge to expense the real value of the consumption of the assets and in periods of inflation will have paid taxes on what is really an expense of business operation.

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[49]Shere, p. 35.

[50]Ryan, p. 36.

> It must be recognized that if tax-free depreciation allowances are insufficient to permit capital recovery before the retirement of the asset, or else result in obsolescence, inequities among taxpayers are bound to arise. The disguised additional toll resulting from insufficient allowances will vary among taxpayers no longer according to the relative size of their income or any real ability to pay but rather according to the degree they have contributed capital to the business and according to the date when they happened to have made their capital investment.[51]

Understandable and Applicable

A depreciation system must be understood by the small business as well as the large business if it is to be fairly applied. In order to achieve this there should be one simple system of depreciation applicable to all. There are three major methods of depreciation in existence at the present time, with many minor ones also being allowed. A quote from the Treasury Department will show the latitude that is allowed:

> Any reasonable method which is consistently applied may be used in computing depreciation. The three methods most generally used are (1) the straight line (2) the declining balance, and (3) the sum of the years-digits.[52]

With such latitude the tax specialist and the companies which can afford the service of a tax specialist will obtain the tax advantage. One single system should apply to all, with the enterprise having the option, within specified limits, of picking the period over which the asset will be depreciated. The opportunity for the schemer is further being increased by

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[51]Ryan, p. 26.

[52]Your Federal Income Tax, p. 58.

the tax credit. He will certainly reduce or increase income by the use of the many questionable but allowable transactions resulting in capital gains and losses. Income and expense will be juggled to obtain maximum benefit from the 7% tax credit. It's even possible that the tax credit will encourage outright dishonesty in an attempt to inflate income shown in a period of high capital expenditures with an offsetting income reduction or loss in periods when capital expenditures are small.

Revision of Bulletin F will have favorable influence in that it will neither add nor subtract from ease of application or enforcement but will have the effect of showing asset lives that are rational and understood. The problem of only having a minimum life period will still exist and will lead to problems previously enumerated.

CHAPTER IV

SUMMARY AND RECOMMENDATIONS

Increasing Importance of Depreciation

Depreciation is becoming of increasing significance as a component of the cost of operation of a business enterprise. This increased importance has been brought about by:

1. Greater mechanization and automation with the resultant increased investments in depreciable assets.

2. Accelerated technological progress that shortens the life of existing depreciable assets by either development of superior types of equipment or changes in the product or type of product produced.

3. The inflationary spiral of rising prices with the resultant need for larger quantities of cash to replace depreciable assets.

Accountant's View of Depreciation

The question then arises--are accountants and financial managers making a realistic analysis of depreciation and its effect? The majority of accountants state that

> . . . depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage /if any/ over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation.[53]

Financial Manager's View of Depreciation

On the other hand the financial manager and engineer are interested in replacement of the asset as its value is consumed through operation and not with simply charging off the historical cost. The realistic depreciation, then, as seen from the financial manager's point of view differs from the accountant's "reckoning in two respects: (1) the write off of cost is more rapid (2) the recoveries are adjusted for changes in the purchasing power of the dollar since the investment was made.[54]

It becomes of utmost importance that the accountant start to view depreciation as a means of charging to expense the real value of capital consumption instead of charging to expense the historical value especially when "in some industries depreciation is the most important single element in cost.[55]

Depreciation and Flow of Funds

Depreciation does not generate funds, as funds can only be generated through sales or borrowing; however, depreciation does show the expense of

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[53]C. Aubrey Smith and Jim G. Ashburne, Financial and Administrative Accounting, 2nd ed. (New York: McGraw-Hill Book Company, Inc., 1960), p. 222.

[54]Terborgh, Realistic Depreciation Policy, p. 123.

[55]Ryan, p. 13.

capital consumption with the resultant requirement for replacement of this consumed capital. A realistic depreciation expense will give a more nearly accurate earnings-before-taxes figure. In turn the earnings-before-taxes figure directly influences the taxes paid and the resultant net earnings.

The importance of showing a true net earnings figure cannot be over-emphasized as this figure is predominate in determining dividend policy, labor negotiations, financial plans and generally management decisions.

Depreciation should offset the need for funds for asset replacement as

> . . . it is only for expanded capacity that there is justification for borrowing of new capital. As a result /of present taxing regulations/ many companies have found it necessary to borrow merely to replace facilities which are wearing out thereby diluting the equity of present investors.[56]

Advantages of Realistic Depreciation

The advantages of realistic depreciation over historical depreciation are first, that it will give the enterprise a realistic tax payment in a period of inflation. The enterprise using historical depreciation is actually paying tax on an income that should in reality be shown as an expense of operation. When depreciation is understated then income will be overstated. Likewise when income is overstated, taxes will be overstated with the result than an enterprise is paying taxes on nonexistent income.

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[56] U. S. Steel's Annual Report for 1949 (New York: U. S. Steel, 1950).

Second, realistic depreciation will give a better accounting of cost. The manufacturing activity that bases its retail pricing on the historical cost information collected by job order or process can find it is actually selling items below their true cost while for book and income tax purposes showing a profit. The day of reckoning will occur when it is time for asset replacement and the amount shown in accumulated depreciation is entirely inadequate as an offset to the purchase price of the replacement item. Realistic depreciation, on the other hand, gives the realistic expense of capital equipment consumption and will enable the enterprise to establish prices and instill economies of operation which will generate a true profit for the enterprise.

Third, the use of realistic depreciation will lead to better decision-making. If an enterprise is to have information to substantiate decisions in labor negotiations, it must know the real productivity of labor. To know labor's real productivity, management must know accurately the real cost of consumption of labor-saving equipment. Costs can only be as precise as the accuracy of depreciation expense assigned to these devices. Another area in which better decision-making will be possible is the dividend policy of the company. If historical depreciation is used, the enterprise can actually be liquidating through dividend payments, while at the same time its statements show the company as making a profit in excess of dividend payments. The use of realistic depreciation will show the true income and will prevent such a farce from occurring. The importance of accurate and realistic income information to the financial manager cannot be overstressed.

He must determine where funds can be employed for the greatest return to the company. If he does not have realistic depreciation of the future, he cannot employ the funds where they will generate the greatest return to the enterprise and will possibly invest funds where an actual loss will occur.[57]

Industry's Response to Realistic Depreciation

Industry cannot blame the politician for lack of a realistic depreciation policy. With a few exceptions industry has failed to adopt such a policy. Terborgh wrote eight years ago and has often repeated, "We do not imply . . . that industry should wait for tax allowability before recognizing realistic depreciation book wise."[58] Industry has failed to change to realistic depreciation, so when the politicians were prepared to establish a revised tax law in 1962 and asked industry for its comments, there was lack both of response and unanimity except to say that it didn't like what the administration proposed. Is there any doubt, then, that industry reaps its just reward when depreciation is determined by what is politically expedient instead of what is in the interests of the owners of the business enterprise?

Recommended Depreciation Method

The author would like to suggest a depreciation method which would meet the six requirements of a viable depreciation policy,[59] would recognize

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[57]For additional thoughts on advantages of realistic depreciation, see Terborgh, pp. 131-132.

[58]Terborgh, p. 131.

[59]Supra, p. 41.

that the greatest value of capital equipment is in the asset's early life, and would recognize a system of charging depreciation expense that will approach the actual consumption of the true value of capital equipment in a period of unstable prices.

The life of assets or groups of assets would be assigned both a minimum and maximum life expectancy by the Treasury Department based on actual information from the business world. The arithmetic average would be calculated and the minimum and maximum set at two standard deviations from the arithmetic average. Businesses, both large and small, could pick their own period over which they were going to depreciate their equipment, so long as it fell within the interval between the maximum and minimum.

Depreciation on these assets would be based on the sum-of-the-year's digits method of computation in all cases. This would give weight to the greatest value of capital equipment occurring in the early part of its life.[60]

The depreciation computed by the sum-of-the-year's digits method for each year of asset acquisition would then be multiplied by a current index reflecting the present replacement.[61] This product would be divided by the index for the year in which the asset was purchased. The total depreciation would, of course, be debited to the account "depreciation expense." The amount equal to historical depreciation would be credited to the account "accumulated depreciation" as an offset to the historical asset account. The amount credited to "depreciation due to inflation/deflation"

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[60] Supra, pp. 13-15.

[61] Supra, pp. 30-32.

would be the result of depreciation change due to inflation or deflation. Therefore, the debit "depreciation expense" would equal the sum of the credits "accumulated depreciation" and "depreciation due to inflation/ deflation."

If this were the one and only method of depreciation, it would: (1) be used by all companies giving the same rights and privileges to all businesses; (2) be applicable to both new and newly acquired used equipment in order to protect the owner's equity in a small business as well as that in the large enterprise; (3) encourage economy and efficiency by not penalizing the vigorous enterprise; (4) maintain the tax revenue received from industry at approximately the present level; (5) encourage replacement of obsolete equipment by having taken depreciation equivalent to the actual value consumption; and (6) establish a depreciation method that is understood and easily applied and enforced.

APPENDIX A

BULLETIN F COMMENTS

> Bulletin F, issued by the Treasury Department in January, 1931, and revised in January, 1942, lists the probable useful life of several hundred items, including, wherever practicable, lives for composite accounts and group accounts. The useful life figures given in the Treasury's table (in Bulletin F) may not be used arbitrarily. They are merely a guide or starting point from which the correct figure may be obtained.[62]

The estimated useful life of depreciable property is an essential factor in determining the correct figure for depreciation. Estimated useful life, however, is not necessarily the useful life inherent in the asset but the period over which the asset is expected to be useful to the taxpayer.

> The lives in the Internal Revenue Service Bulletin F are largely based on historical evidence accumulated in periods of depression and financial stringency. The experience was also accumulated in periods when technological advance was proceeding at a much slower rate. Therefore, while it is probably true that Bulletin F rates can be supported by some sort of historical evidence, it is equally true that this type of evidence is largely irrelevant and has little or no bearing on present-day conditions.
>
> The general view seems to be that Bulletin F. with its insistence on physical life and its minute classification of depreciable property, has outlived whatever usefulness it once may have had. It either should not be reissued at all or should be reissued in a different form, based on broad classifications, with a substantial latitude and option given to the taxpayer in much the same way as he has been described by the advocates of shortened lives.

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[62] Prentice-Hall Federal Tax Course 1962 (Englewood Cliffs, N. J.: Prentice-Hall Inc., 1961), p. 2020.

It is estimated that it would cost $95 billion to replace all obsolete facilities in this country with the best new plant and equipment. This is based on the results of a questionnaire addressed to industry by the McGraw-Hill Publishing Company, in which this question was asked of a large number of representative enterprises in all types of business throughout the country. There seems to be no reason to doubt the substantial validity of this figure.

As the total depreciation allowed for tax purposes in the United States is something in the general range of $12 billion, it appears that it would take about six years of depreciation on the present base at present rates to pay for what is obsolete now. While this lag was being taken up, we would also have six years more of obsolescence on plant now in use.

If any proof beyond day-to-day observation of industry were needed to prove that Bulletin F rates are unrealistically long and do not, in any effective way, provide for obsolescence, the existence of this enormous backlog of obsolete property would make it perfectly clear that little or no obsolescence is provided for under present depreciation rates.

Deficiency in depreciation measured by the difference in depreciation as now allowed, and depreciation at the same rates on current value, is estimated at something between $4 billion to $6 billion per year. The figure of $6 billion is estimated by George Terborgh of the Machinery and Allied Products Institute and seems to be reasonable and soundly based statistically.[63]

A special Internal Revenue Service engineering study of six major industries, being made as part of the Treasury Department's review of depreciation schedules for all industries is slated for completion at the end of "January 1962." Engineers are examining the useful lives of major types of machinery and equipment in the following industries: production of aircraft and parts, automobiles, metal working and machine tools; and railroads and steel. Approximately fifty companies, as well as their related associations, are encompassed in the six-industry study. The data acquired by the Treasury is to supplement its own statistical studies of current depreciation practices. The new studies are expected to provide information on actual and prospective technological changes and rates of obsolescence in capital equipment, in general.

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[63]Maurice E. Peloubet, "Insufficient Depreciation and Inflation--What Can Be Done About It?," The Controller, March, 1959, p. 3.

> By spring 1962, the Treasury hopes to announce revised depreciation schedules for fixed assets in all industries. Prior to that date, no change will be made in depreciation guide lines for any specific industry. Additional engineering studies covering other industries will be started as soon as possible. If they are not completed before announcement of the depreciation schedule revisions the Treasury says that adjustments will be made based on information developed, when studies indicate the justification for such changes.[64]

It appears that a revised Bulletin F will be offered prior to the end of this calendar year and will be available for computing depreciation in the year of 1962. This is a definite step forward in establishing a depreciation policy that will protect the owner's equity.

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[64]Charles E. Noyes ed. "Current News," The Journal of Accountancy, January, 1962, p. 19.

APPENDIX B

Section 167 of the Internal Revenue Code of 1954, which applies to depreciation, is included in its entirety.

SEC. 167. DEPRECIATION

(a) GENERAL RULE.--There shall be allowed as a depreciation deduction a reasonable allowance for the exhaustion, wear and tear (including a reasonable allowance for obsolescence)--

(1) of property used in the trade or business, or

(2) of property held for the production of income.

(b) USE OF CERTAIN METHODS AND RATES.--For taxable years ending after December 31, 1953, the term "reasonable allowance" as used in subsection (a) shall include (but shall not be limited to) an allowance computed in accordance with regulations prescribed by the Secretary or his delegate, under any of the following methods:

(1) the straight line method,

(2) the declining balance method, using a rate not exceeding twice the rate which would have been used had the annual allowance been computed under the method described in paragraph (1),

(3) the sum of the years-digits method, and

(4) any other consistent method productive of an annual allowance which, when added to all allowances for the period commencing with the taxpayer's use of the property and including the taxable year, does not, during the first two-thirds of the useful life of the property, exceed the total of such allowances which would have been used had such allowances been computed under the method described in paragraph (2).

Nothing in this subsection shall be construed to limit or reduce an allowance otherwise allowable under subsection (a).

(c) LIMITATIONS ON USE OF CERTAIN METHODS AND RATES.--Paragraphs (2), (3), and (4) of subsection (b) shall apply only in the case of property (other than intangible property) described in subsection (a) with a useful life of 3 years or more--

(1) the construction, reconstruction, or erection of which is completed after December 31, 1953, and then only to that portion of the basis which is properly attributable to such construction, reconstruction, or erection after December 31, 1953, or

(2) acquired after December 31, 1953, if the original use of such property commences with the taxpayer and commences after such date.

(d) AGREEMENT AS TO USEFUL LIFE ON WHICH DEPRECIATION RATE IS BASED.--Where, under regulations prescribed by the Secretary or his delegate, the taxpayer and the Secretary or his delegate have, after the date of enactment of this title, entered into an agreement in writing specifically dealing with the useful life and rate of depreciation of any property, the rate so agreed upon shall be binding on both the taxpayer and the Secretary in the absence of facts or circumstances not taken into consideration in the adoption of such agreement. The responsibility of establishing the existence of such facts and circumstances shall rest with the party initiating the modification. Any change in the agreed rate and useful life specified in the agreement shall not be effective for taxable years before the taxable year in which notice in writing by certified mail or registered mail is served by the party to the agreement initiating such change.

(e) CHANGE IN METHOD.--In the absence of an agreement under subsection (d) containing a provision to the contrary, a taxpayer may at any time elect in accordance with regulations prescribed by the Secretary or his delegate to change from the method of depreciation described in subsection (b) (2) to the method described in subsection (b) (1).

(f) BASIS FOR DEPRECIATION.--The basis on which exhaustion, wear and tear, and obsolescence are to be allowed in respect of any property shall be the adjusted basis provided in section 1011 for the purpose of determining the gain on the sale or other disposition of such property.

(g) LIFE TENANTS AND BENEFICIARIES OF TRUSTS AND ESTATES.--In the case of property held by one person for life with remainder to another person, the deduction shall be computed as if the life tenant were the absolute owner of the property and shall be allowed to the life tenant. In the case of property held in trust, the allowable deduction shall be apportioned between the income beneficiaries and the trustee in accordance with the pertinent provisions of the instrument creating the trust, or, in the absence of such provisions, on the basis of the trust income allocable to each. In the case of an estate, the allowable deduction shall be apportioned between the estate and the heirs, legatees, and devisees on the basis of the income of the estate allocable to each.

(h) DEPRECIATION OF IMPROVEMENTS IN THE CASE OF MINES, ETC.--

For additional rule applicable to depreciation of improvements in the case of mines, oil and gas wells, other natural deposits, and timber, see section 611.

APPENDIX C

The Report of the Committee on Ways and Means of the House of Representatives accompanying HR 10650 and explaining the portion applicable to investment credit is included in its entirety.

III. INVESTMENT CREDIT
(Sec. 2 of the bill--new secs. 38 and 46-48 of the code)

A. Reasons for provisions

The President in his tax message to Congress last year urged the adoption of a tax incentive in the form of a credit against tax liability for certain types of investment. He renewed this request this year in both his budget message and his Economic Report.

In his Economic Report the President states--

> We must scrutinize our tax system carefully to insure that its provisions contribute to the broad goals of full employment, growth, and equity.

He indicates that his legislative proposals in the tax field are directly related to these goals and the corollary need for improvement in the balance of payments. He further states:

> The centerpiece of these proposals is the 8-percent tax credit against tax for gross investment in depreciable machinery and equipment. The credit should be retroactive to January 1, 1962. The tax credit increases the profitability of productive investment by reducing the net cost of acquiring new equipment. It will stimulate investment in capacity expansion and modernization, contribute to growth of our productivity and output, and increase the competitiveness of American exports in world markets.

The President also points out that the tax credit for investments is in part self-financing. He indicates that the stimulus it provides to new investments will have favorable effects on the level of economic activity during the year and that this will in turn add to Federal revenues.

The 8-percent tax credit provided by this bill is a complement to the administration's plans for revising the guidelines for the tax lives of property subject to depreciation. It is believed that the investment credit, coupled with the liberalized depreciation, will provide a strong and lasting stimulus to a high rate of economic growth and will provide an incentive to invest comparable to those available elsewhere in the rapidly growing industrial nations of the free world.

The Secretary of the Treasury has indicated that further depreciation revisions will be announced this spring. He has specified that the basic objective of these revisions is to provide realistic tax lives in the light of past actual practices and present and foreseeable technological innovations and other factors affecting obsolescence. The Secretary has stated that another facet of this objective is to achieve a more simple and flexible system of depreciation moving toward guideline lives for broad classes of assets used by each of the industries in our economy.

Realistic depreciation alone, however, is not enough to provide either the essential economic growth or to permit American industry to compete on an equal basis with the rapidly growing industrial nations of the free world. The major industrialized nations of the free world today provide not only liberal depreciation deductions but also initial allowances or incentive allowances to encourage investment and economic growth. This is true, for example, in Belgium, Canada, France, West Germany, Italy, Japan, the Netherlands, Sweden, and the United Kingdom.

The investment credit will stimulate investment because--as a direct offset against the tax otherwise payable--it will reduce the cost of acquiring depreciable assets. This reduced cost will stimulate additional investment since it increases the expected profit from their use. The investment credit will also encourage investment because it increases the funds available for investment. Generally, for each $100 of investment business, because of the tax credit, will have $8 more than otherwise would be the case for additional investment. Moreover, since the credit applies only to newly acquired assets, the incentive effect is concentrated on new investment and no revenue is lost in raising the profitability of assets already held by business firms. In addition, it is the hope of the committee that the savings from the credit itself also will be used for new investment in further advancing the economy.

The investment credit provided by this bill generally provides an offset against the tax otherwise due equal to 8 percent of the investments made. It does not affect the depreciation, which may be taken, either initially or in subsequent years. As

a result the tax credit concentrates the benefit provided in the initial year of the investment, thereby maximizing the stimulative effect.

The investment credit in the case of most regulated public utilities is in effect 4 percent rather than 8 percent. The smaller credit is provided in such cases because much of its benefit in these regulated industries is likely to be passed on in lower rates to consumers, thereby negating much of the stimulative effect on investments. Moreover, the size of the investment in regulated public utilities, such as electric companies, local gas companies, telephone companies, etc., will in large part be determined by the growth of other industries, rather than their own.

In your committee's consideration of the investment credit last year it was planned to make the credit available only with respect to assets with a life of 6 years or over. However, its review this year has convinced your committee that the credit should be made available at least in part for shorter lived assets. There is a substantial volume of industrial equipment with lives of 4 and 5 years, investment in which should also be encouraged. At the same time your committee recognized that, with the more rapid turnover of short-lived assets, the plan as considered last year would have provided a substantially greater investment credit for short-lived assets than for longer lived assets. For example, in the case of a $1,000 investment in a 4-year asset, which is replaced as it wears out, three $80 credits could be obtained in the same time span in which one $80 credit could be obtained in the case of a $1,000 investment in a 12-year asset. As a result of these factors, your committee has provided that assets with lives of from 4 up to 6 years are to be taken into account in determining the allowable credit on the basis of one-third of the investment made; those with lives of from 6 up to 8 years are to be taken into account on the basis of two-thirds of the investment made; and only those with expected lives of 8 years and over will be taken into account on the basis of the full investment for purposes of the credit.

The bill, by limiting the credit principally to property which is new in use will limit the investment stimulant primarily to provision for new production facilities. However, because of the greater dependence of small business on used property, a limited credit is also made available for used property which is newly acquired.

The credit is available for investments in most tangible personal property. It also is available for limited types of real property, other than buildings. The greater emphasis is placed on equipment and machinery because it is believed the need for such investment is the major requirement of the economy.

B. General explanation of provision

1. Summary.--The bill provides a credit (in code sec. 38), which may be offset directly against income tax liability. The credit generally is an amount equal to 8 percent of "qualified investment" which includes both purchases of new equipment, and also, to a limited extent, purchases of used equipment. In the case of property with an expected useful life of 4 up to 8 years, the investment taken into account in computing the 8-percent credit is graduated from one-third in the case of the 4-year assets up to 100 percent in the case of property with a useful life of 8 years or more. In the case of most public utilities, however, only half of the investment as otherwise determined is included in computing the credit.

The types of property, whether new or used, which are included in qualified investment are described as "section 38 property." This property includes most tangible personal property. It also includes certain real property, other than buildings (or structural components) if the property is used directly in manufacturing, production, transportation, etc.

Once the amount of the 8-percent credit against tax is determined, the amount which may be claimed in any one year is limited to the tax liability, or if this tax liability exceeds $100,000, the credit (to the extent it exceeds this amount) is limited to 50 percent of the tax liability. However, a 5-year carryforward is provided for any of these credits which because of this limitation are unused. The bill also provides that where the property is disposed of before the end of its life as estimated for the credit (and this is less than 8 years) the credit is reduced to the amount which would have been allowed initially had the useful life of the asset been correctly estimated.

These provisions are described briefly below.

2. Qualified investment.--Investment which is eligible for the 8-percent investment credit is referred to in the bill as "qualified investment" (sec. 46(c). Qualified investment includes both new property and a limited amount of used property. Property qualifies for the investment credit in the year it is placed in service by the taxpayer, even though under the depreciation convention used by the taxpayer, he may not be eligible to start depreciation on the property until the coming year.

The percentage of investment which the taxpayer may take into account as qualified investment varies to some degree with the expected useful life of the property in his business. No part of the investment in property with an expected useful life of less than 4 years is taken into account. Property with an expected useful life of 4 years and up to (but not including) 6 years is taken into account at one-third of the amount of the investment actually made; property with an expected useful life of 6 years and up to (but not

including) 8 years is taken into account on the basis of two-thirds of the investment made; and property with a longer life is taken into account at the full amount of the investment.

Public utility property is taken into account as qualified investment at one-half of the amount otherwise allowable. Thus, in the case of 4- or 5-year public utility property, one-sixth of the investment is taken into account; in the case of 6- or 7-year property, one-third of the investment is taken into account; in the case of property with a life of 8 years or more, one-half is taken into account. This means that in the case of public utility property with an expected useful life of 8 years or more, in effect a 4-percent credit is allowed. Public utility property for this purpose means property used predominantly in an electrical energy, water or sewage disposal business, a local gas distribution business, a telephone business, or a domestic telegraph business, but only if the rates involved in all of these cases are subject to regulation by a governmental agency or commission.

3. New and used property.--The new property taken into account as qualified investment (sec. 48(b), must be purchased or otherwise acquired after December 31, 1961, and its first use commenced by the taxpayer after that date. Other new property eligible for the credit also includes property constructed, reconstructed, or erected by the taxpayer after that date. These are the same rules which applied with respect to the new forms of depreciation provided in 1954.

Used property (sec. 48(c), eligible for the credit, also must be purchased after December 31, 1961, but, of course, is not property which is new in use with the taxpayer. To prevent abuse, however, there has been omitted from the term "used property," available for the credit that which is used by a person who used the property before such acquisition (and also that which is so used by a person who is related to a person who used the property before its present acquisition).

The cost of any used property which may be taken into account is limited to $50,000 a year. Where used property with varying useful lives is acquired the taxpayer may select the property to be taken into account for the investment credit. Presumably he will select assets with lives of 8 years or more since there is no one-third or two-thirds reduction in such cases.

In the case of a husband and wife filing separate returns, the amount of used property which may be taken into account by each is $25,000 instead of $50,000, unless one of the two has not purchased any used section 38 property, in which case, the other spouse may claim the entire amount up to $50,000. This prevents any double allowance for married couples. In the case of affiliated groups of corporations (with a 50-percent test of common ownership instead of the 80 percent usually applied), there is to be one $50,000 used property allowance for the group and it is to be apportioned among

the members of the group in accordance with their purchases of this property. In the case of partnerships, this limitation applies both at the partnership level and also with respect to each partner. Thus, $50,000 is the limit with respect to used property which may be qualified for any partnership, and then there is a further $50,000 limit at the partner level. This latter limit may further restrict the used property eligible for the credit where a partner, in addition to his share of investment in one partnership, has either from another partnership or as a sole proprietor, additional used property investment for which he may receive a credit. The total of these which qualify for the credit may not exceed $50,000.

To prevent a double allowance where used property is traded in on used property, or where used property is disposed of and other used property "similar or related in service or use" is acquired as a replacement, the cost otherwise allowable for the used property acquired is reduced by the adjusted basis of the property disposed of in both of these types of cases. However, this "replacement" reduction in the credit is not to apply where there otherwise is a reduction in the credit for the property disposed of because of its disposal within 8 years and before the end of what had been its estimated useful life. (See heading 5 below.)

4. "Section 38" property.--Section 38 property (defined in sec. 48(a)), is the only property (either new or used) which is treated as "qualified investment." Except for the exclusions noted below, all tangible personal property qualifies as section 38 property. Except for buildings and their structural components, real property which is used as an integral part of manufacturing, production or extraction or of furnishing transportation, communications, electrical energy, gas, water or sewage disposal services also qualifies as section 38 property. This is also true of real property (other than buildings and structural components) used for research or storage facilities with respect to any of the above categories. Tangible personal property is not intended to be defined narrowly here, nor to necessarily follow the rules of State law. It is intended that assets accessory to a business such as grocery store counters, printing presses, individual air-conditioning units, etc., even though fixtures under local law, are to qualify for the credit. Similarly, assets of a mechanical nature, even though located outside a building, such as gasoline pumps, are to qualify for the credit. Real property (other than buildings and structural components) which qualifies as integral parts of categories referred to above includes such assets as blast furnaces, oil and gas pipelines, railroad track and signals, and fences used in connection with raising cattle.

Section 38 property must be depreciable property and have a useful life of 4 years or more. As indicated elsewhere, property with estimated useful lives of from 4 to 8 years is only partially taken into account for purposes of the investment credit.

There also are certain categories of property which are excluded from the definition of section 38 property and, therefore, cannot qualify for the credit. These exclusions are:

(1) Property used predominantly to furnish lodging or in connection with the furnishing of lodging. However, there are two exceptions to this exclusion. First, property used in non-lodging commercial facilities (such as a restaurant) located in lodging facilities (such as a hotel) may qualify for the credit if the non-lodging commercial facilities are available for use by the general public on the same basis as for the lodgers. Second, property used in a hotel or motel which primarily serves transient guests may qualify for the credit. The first of these two rules is essential to place nonlodging commercial facilities located in an apartment building, etc., on an equal competitive basis with similar facilities located elsewhere. The allowance of the credit in the case of a hotel or motel also is used in a regular commercial venture and, therefore, it was believed that it too should be eligible for the investment credit.

(2) Property used by a tax-exempt organization (other than in a business to which the unrelated business income tax applies). The limitation on the allowance of the credit in this case is designed to prevent an investment for use in connection with an exempt function from decreasing any tax on an unrelated trade or business.

(3) Property used by governmental units. Property leased to governmental units is omitted since allowing the lessor in such cases an investment credit would not be expected to increase the use of such property by the governmental units.

(4) Property used predominantly outside of the United States. However, there are certain exceptions where this type of property is eligible for the credit, namely, in the case of domestically owned aircraft, rolling stock of railroads, vessels and motor vehicles, where the use is partially within and partially without the United States. Similarly, an exception is made for domestically owned containers which are used in the transportation of property to or from the United States. A further exception is made for domestically owned property used in exploring for, developing, removing, or transporting natural resources from the Outer Continental Shelf of the United States. Property used predominantly outside of the United States (with the exceptions noted) is omitted, since the primary purpose of the credit is to encourage investment within the United States.

5. Limitation on tax credit.--The tax credit, under your committee's bill (sec. 46(a) (2)) may not exceed the tax liability, or if the tax liability is in excess of $100,000, may not exceed $100,000 plus 50 percent of the tax liability over this amount. This limitation, while leaving substantial leeway for utilizing the credit, is designed to prevent it (in combination with other tax credits) from relieving the taxpayer from any substantial tax

contribution. However, in recognition of the problems of small business, the bill does not impose this limitation with respect to the first $100,000 of any tax liability.

Although this limitation with respect to the allowance of the investment credit is imposed for the year in which the investment is made, nevertheless, any investment credit which, because of this limitation, cannot be used in the current year may be carried forward by the taxpayer and used in any of the succeeding 5 years if the credit in any such year is less than the tax limitation.

Tax liability for purposes of this limitation is computed without regard to the accumulated earnings tax or personal holding company tax liability, but after the application of the foreign tax credit, the 4-percent dividends-received credit, the credit for partially tax-exempt interest and the retirement income credit. In order to prevent a full allowance with respect to $200,000 of tax liability in the case of a married couple, the bill provides that for a married individual filing a separate return the tax liability limitation is $50,000 instead of $100,000. However, if either the husband or the wife has no qualified investment (or unused credit carryover), the one having the investment or carryover may make use of the entire $100,000. In the case of an affiliated group there is one $100,000 of tax liability which can be fully offset by qualified investment and this is by regulations to be apportioned among the members of the affiliated group.

6. Certain dispositions of section 38 property.--To guard against a quick turnover of assets by those seeking multiple credit, --the bill provides (in sec. 47) a special adjustment. Under this provision if property is disposed of, or otherwise ceases to be section 38 property, the tax for the current year is to be increased by the reductions in investment credits (which would have resulted in the prior years) had the investment credits allowable been determined on the basis of the actual useful life of the property rather than its estimated useful life. This means, for example, that if an asset which had previously been estimated to have a useful life in the business of 8 years or more actually is used by the taxpayer only for 6 years, the investment credit for the year in which the investment was originally made will be recomputed on the basis of two-thirds the investment made. Had this asset been sold after 4 or 5 years' use, the allowable investment would have been recomputed on the basis of one-third of the actual investment and had it been sold after a still shorter period, no credit at all would have been allowed.

Although the credit is recomputed for the earlier year in which the investment was made, the actual adjustment in tax occurs in the current year, namely, the year in which the asset is disposed of (or otherwise ceases to be sec. 38 property). This makes it unnecessary actually to recompute taxes in the prior years, or to

extend the statutory periods of limitations. An adjustment is also made in any carryovers of unused credits so that they too will reflect the reduced amount of investment to be taken into account.

Although disposal of assets within a shorter period of time than their estimated useful life (where this is less than 8 years) usually will be the factor resulting in downward adjustments in the credit allowed, the credit must also be adjusted if property ceases to qualify as section 38 property; where, for example, its use becomes predominantly outside of the United States. A downward adjustment in the credit also is required where property is converted to public utility property for which only a reduced credit is available. As indicated previously, a credit is allowed for certain types of puclic utility property equal only to half of the credit generally allowable. Where property is converted to such use (again, before the end of its estimated useful life and within the 8-year period) a downward adjustment must be made. In this case, however, instead of disqualify-one-third, two-thirds, or all of the property, depending upon the period of time involved before the conversion to public utility use is made, one-half of such an adjustment is made, since the public utility property itself qualifies for the credit for the remaining period of time but on a reduced basis.

Few exceptions are made to the adjustment rule for the credit described above because in no case does this result in a lesser credit than would be available had the useful life of the property been estimated accurately. Moreover, since the tax increase occurs in the current year, and not with respect to the prior year in which the investment occurred, no interest is charged with respect to the increase in tax resulting from the reduction in credit. As a result, your committee believed that it was necessary to forego the application of the adjustment rule only in the case of the transfer of property by reason of the death of the taxpayer or in the case of corporations where a successor corporation "stands in the shoes" of the predecessor corporation. The successor corporation in such a case, of course, must continue to hold the property for the appropriate period of time, or an increase will be made in its tax because of the disposition of the property prior to the end of its estimated useful life.

7. Election for leased property.--The bill provides (in sec. 48 (d)) that a person engaged in the business of leasing property may elect with respect to new property to treat the investment as if made by the lessee instead of the lessor. This election applies only with respect to new property and is not available for used property. Permitting the investment credit to be passed on to the lessee in these cases is believed to be desirable since, as a result of this provision, it is possible for the lessor to pass the benefit of the investment credit on to the party actually generating the demand for the investment.

If the lessor makes this election, then the lessee is treated for purposes of this provision as if he had acquired the property himself, that is, generally he will be treated as if he had acquired the property for the lessor's cost or other basis for the property. However, if the lessor constructed the property (or a corporation controlled by or which controlled the lessor did so) the lessee is treated as having acquired the property for its fair market value. The useful life of the property in the hands of the lessee in such cases is to be its useful life in the hands of the lessor for purposes of computing the size of the credit available. This is true whether or not the lease itself is for a shorter period of time. Of course, in such cases if the lessee does not renew the lease and hold the property for the estimated useful life of the property in the hands of the lessor, then a downward adjustment will be made in his investment credit.

8. Special classes of taxpayers.--A number of special categories of taxpayers receive special tax treatment under the Internal Revenue Code which makes it inappropriate in their cases to allow the full investment credit. For other taxpayers, the code provides that income may be taxed in part to the organization and in part to its shareholders or beneficiaries. In these situations your committee's bill either cuts down the allowance of the tax credit in proportion to the special benefit received, or provides for the apportioning of the investment credit between the organization and its shareholders or beneficiaries in accordance with their sharing of income for tax purposes. Similar adjustments are also provided in the $100,000 tax liability limitation.

In the case of mutual savings banks, building and loan associations and cooperative banks, the investment credit allowable is reduced by 50 percent (largely offsetting the 60 special deductions they are allowed). The $100,000 tax liability limitation is also similarly reduced for these organizations.

In the case of regulated investment companies and real estate investment trusts, the qualified investment allowed them and the applicable $100,000 tax liability limitation are reduced in the same proportion in which their taxable income is reduced by dividends paid to shareholders or beneficiaries. Similarly, in the case of cooperatives, the qualified investment and $100,000 tax liability limitation to be taken into account are reduced in the same proportion in which their taxable income is reduced for patronage dividends (and in the case of exempt cooperatives its deductions for dividend payments on capital stock, patronage distributions with respect to U. S. business and income distributed to patrons from sources other than patronage).

In the case of subchapter S corporations, i.e., corporations treated in a manner similar to that of partnerships, since it is the shareholders, rather than the corporation, who are taxed on the income of the corporation, the bill (sec. 48(c)) divides the qualified

investment for each year on a pro rata basis among the shareholders of the corporation at the end of the year. In this case since the shareholders are treated as the taxpayer, the investment maintains its character as new or used section 38 property in their hands. Similarly, the bill (in sec. 48(f)) provides that qualified investment in the case of estates or trusts is to be apportioned between the estate or trust on one hand and the beneficiaries on the other on the basis of the income of the estate or trust allocable to each. As in the case of the subchapter S corporations, the beneficiary is treated as the taxpayer with respect to the investment apportioned to him and therefore the investment retains its character in his hands as new or used section 38 property. The $100,000 tax liability limitation in the case of the estate or trust is reduced in proportion to the total income allocated to other than the estate or trust.

9. Carryovers in the case of certain corporate acquisitions.--Generally, in the case of certain tax-free acquisitions of assets of one corporation by another, present law provides that certain items of the first corporation are to be carried over and attributed to the second. This includes such items as net operating loss carryovers, earnings and profits, methods of accounting, methods of computing depreciation allowance, etc. The bill adds to this list (sec. 381(c) (23)) a carryover to the acquiring corporation in the case of these tax-free reorganizations of the status of the prior corporation with respect to items required to be taken into account for purposes of the investment credit. This mainly is concerned with (1) the carryover of the possibility of adjustment with respect to the investment credit where an asset is held for less than the full period of its estimated useful life and (2) the carryover of any unused investment credit in the prior 5 years.

10. Effective date.--The bill provides that the investment credit is to apply to taxable years ending after December 31, 1961. However, in the definition of new section 38 property and also used section 38 property (the only types of property eligible for the credit) it is provided that a credit is to be available only with respect to acquisitions after December 31, 1961, or in the case of new property only with respect to the portion of the property which is constructed, reconstructed or erected after that date. The combination of the effective date and these definitions of new and used section 38 property in effect provide that the investment credit is to be available only with respect to property acquired (or in the case of new property also constructed, reconstructed, or erected) after December 31, 1961, with respect to taxable years ending after that date.[65]

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[65] U. S. Congress, House, Committee on Ways and Means, Report to Accompany H. R. 10650, A Bill to Amend the Internal Revenue Code of 1954 to Provide a Credit for Investment in Certain Depreciable Property, to Eliminate Certain Defects and Inequities and for Other Purposes, 87th Cong., 2d Sess., 1962, pp. 7-16.

The Committee on Ways and Means adopted amendments to HR 10650, the "Revenue Act of 1962," on March 22, 1962. These amendments changed the credit investment portion of the bill as follows:

The generally available credit was changed from 8% to 7% of qualified investments and the credit available for regulated public utilities was changed from 4% to 3%.

The tax liability limitation was also revised. The amount which may be claimed in any one year is limited to the tax liability, or if this tax liability exceeds $25,000 (instead of $100,000), the credit, is to the extent it exceeds that amount, is limited to 25 (instead of 50) per cent of the tax liability.

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